

ENGINEERING HERITAGE RECOGNITION PROGRAM

Nomination of **Circular Quay Seawall** as an Item of Engineering Heritage Interest

Item Name:	Circular Quay Seawall		
Other/Former Names:	The area was known by the Eora people (the traditional Aboriginal owners), as Warrane.		
Locality:	Sydney Cove		
Address:	Alfred Street, Sydney		
Co-ordinates	<i>Lat: -33.861154, Long: 151.210934</i>		
Current Owner:	Port Authority NSW		
Original Owner:	NA		
Current use:	Ferry and tourist vessel wharfage		
Former use:	Government Wharf, and marshy waterfront and mudflats.		
Proposed use:	Ferry and tourist vessel wharfage		
Item Condition:	Excellent – as modified		
Designer:	George Barney, Colonial Engineer		
Builder:	Convict labourers under George Barney		
Started:	1837	Completed:	1844
History:	<p>In its natural state the southern shore of Sydney Cove was dominated by low-tide-exposed swampy flats, at the mouth of what became known as the Tank Stream.</p> <p>Captain George Barney RE arrived in Sydney in 1835 to assume duties as Commanding Royal Engineer; he was soon also appointed Colonial Engineer.</p> <p>‘Before Barney had arrived, there had been a review of the need for a quay at the head of Sydney Cove. In 1836 the matter was raised again and Barney gave evidence before a review committee and proposed:</p> <ul style="list-style-type: none">• conversion of the Tank Stream to a sewer;• the importing from England of a dredge with two punts and two diving bells;• construction of a semi-circular quay of about 2500 feet with a depth of 20 feet of water, suitable for 20 average-sized vessels at one time;• preparation of sandstone blocks, to start immediately, to be hewn mainly from street construction sites; and• that convict labour be used.¹ <p>Work commenced in 1837. ‘The wall of Circular Quay was cut from rock quarried on Cockatoo Island... It was the last major public work to utilise convict labour’.² Sandstone was also sourced from a quarry at the tip of Bennelong Point.³</p> <p>‘The project involved the reclamation of about ten acres (4 hectares) of swampland behind the sea-wall. It was said to be one of the biggest</p>		

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	<p>reclamation projects in the world at the time. Several thousand convicts were involved and the project was completed in 1844'.¹ Extension of the wall to link up with Campbell's wharves - along the north west arm of the cove, was completed by 1853.⁴</p> <p>Construction of the wharves at Circular Quay was done in phases until the 1860s to allow for commercial shipping to berth alongside warehouses that once dominated all three sides.</p> <p>However, by the 1870s, much of the commercial shipping activity was moving away from Circular Quay. The harbour was becoming too small to accommodate the increasing number of large ships accessing Sydney. Instead, shipping activities moved further westwards to Darling Harbour, which also had the advantage of a railway line.</p> <p>'With the absence of commercial shipping, the harbour became increasingly used for passenger transport. The first ferry wharf was built on the southern shore in 1879. From the 1890s, ferry terminals came to dominate the harbour, and Circular Quay became the hub of the Sydney ferry network'.⁵</p> <p>From 1936, the appearance of Circular Quay was dramatically changed with the construction of a railway viaduct and station, and later the elevated Cahill Expressway above the viaduct. This involved 'squaring off' the southern end of the quay. A concrete deck supported on timber piles was constructed in the water cutting off the semi-circular section of the quay; it was connected to the existing hard-stand, with this work being completed around 1943. The caissons to support the Circular Quay railway and station were sunk into the harbour. The work necessitated construction of new ferry wharves. The station was opened on 20 January 1956 and the elevated Cahill Expressway was officially opened on 24 March 1958. It is assumed that the original seawall still exists under the 1936-1943 deck.</p> <p>As part of the works undertaken in 1988 for the nation's bi-centenary, the pedestrian plaza was re-paved in brick, and Writer's Walk was created by inserting at intervals, large circular bronze plaques in the paving around the quay, commemorating writers significant to Australia. And the 1788 shoreline was designated in the paving with small round medallions, and Barney's 1844 shoreline, with square ones.</p> <p>The Circular Quay area is a popular neighbourhood for tourism and consists of walkways, pedestrian malls, parks and restaurants. It hosts a number of ferry wharves, bus stops, a light rail terminus and a railway station. Often referred to as the "gateway to Sydney", the precinct has views of the Sydney Harbour Bridge and the Sydney Opera House and is a common location for viewing Sydney New Year's Eve fireworks.⁵</p>
Description:	<p>When constructed, the Circular Quay seawall was horseshoe-shaped with the circular end being at the south. It was of sandstone quarried from Cockatoo Island and Bennelong Point, and was built between 1837 and 1844, by convicts under Colonial Engineer George Barney. Its construction included reclamation of the estuary of the Tank Stream back to Bridge Street – an area of about 10 hectares, and converting the stream into a sewer.</p> <p>From 1936, the appearance of Circular Quay was dramatically changed with the construction of a railway viaduct and station, and later the elevated Cahill Expressway above the viaduct. This involved 'squaring off' the southern end of the quay. A concrete deck supported on timber piles</p>

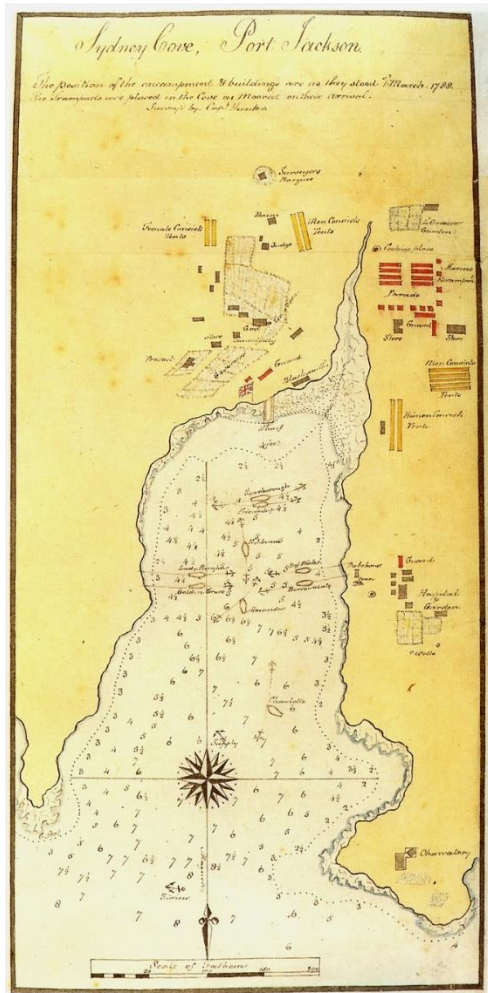
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Engineering Significance:	<p>The Circular Quay seawall is associated with Captain George Barney, the first and one of the most significant colonial engineers, and also with the convict population which constructed the infrastructure necessary to the development of the Colony of NSW.</p> <p>It was the first seawall built in the Colony, with diving bells, and a dredge imported from England for its construction and excavation of fill for the reclamation behind the wall.</p> <p>The seawall was essential to the development and prosperity of the colony by facilitating the receipt of new arrivals, the landing of imports, and for the dispatch of export cargoes from agriculture (such as wool) and from developing industries.</p>
Webpage Summary:	<p>When constructed, the Circular Quay seawall was horseshoe-shaped with the circular end being at the south. It was of sandstone quarried from Cockatoo Island and Bennelong Point, and was built between 1837 and 1844, by convicts under Colonial Engineer George Barney. Its construction included reclamation of the estuary of the Tank Stream back to Bridge Street – an area of about 10 hectares, and converting the stream into a sewer.</p> <p>From 1936, the appearance of Circular Quay was dramatically changed with the construction of a railway viaduct and station, and later the elevated Cahill Expressway above the viaduct. This involved ‘squaring off’ the southern end of the quay. A concrete deck supported on timber piles was constructed in the water cutting off the semi-circular section of the quay; it was connected to the existing hard-stand, with this work being completed around 1943. The caissons to support the Circular Quay railway and station were sunk into the harbour. The work necessitated construction of new ferry wharves. The station was opened on 20 January 1956 and the elevated Cahill Expressway was officially opened on 24 March 1958. It is assumed that the original seawall still exists under the 1936-1943 deck.</p>
Engineering Theme:	Transport - Sea, Air and Space
Heritage Listing: (State and/or Local Authority)	None known.
References/Sources:	<p>¹ Ralph Sutton: <i>George Barney re (1792-1862), First Colonial Engineer</i>. The Engineering Conference, 2 -6 April 1984.</p> <p>² visitsydneyaustralia.com.au/en.wikipedia.org</p> <p>³ https://dictionaryofsydney.org/place/circular_quay</p> <p>⁴ Michael Clarke: <i>Sydney’s Engineering Heritage and other sites</i>. July 1999.</p> <p>⁵ https://en.wikipedia.org/wiki/Circular_Quay</p>

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